

WHAT IS CLAIMED IS:

1. A central management apparatus for managing devices connected to device management units by data communication with the device management units, the central management apparatus comprising:

5 a memory for storing the fixed-time transmission time determined for each device;

10 a setting means for setting an allowable time for each device or each device management unit connected to the devices based on the communication method of each device management unit; and

15 a determination means for determining that a device that has not transmitted data until the allowable time has elapsed after the fixed time stored in memory is a non-communicating device.

2. A central management apparatus as claimed in Claim 1, further comprising:

20 a fixed-time transmission time setting means for setting the next fixed-time transmission time for each device; and

a transmission means for transmitting the set fixed-time transmission time to the device management unit connected to each device.

3. A central management apparatus as claimed in

Claim 2,

wherein said fixed-time transmission time setting means sets the next fixed-time transmission time in accordance with the communication method of the connected device management unit.

4. A central management apparatus as claimed in

Claim 2,

wherein said fixed-time transmission time setting means allots an earlier time to devices having a long allowable time set by the setting means than devices having a short allowable time.

5. A central management apparatus as claimed in

Claim 1,

wherein said communication methods including a first method for transmitting data over a public telephone line, and a second method for transmitting data by electronic mail over the internet.

6. A central management apparatus as claimed in

Claim 5,

wherein said setting means sets the allowable time of the device management unit using the first method of

communication so as to be shorter than the allowable time of the device management unit using the second method of communication.

5 7. A central management apparatus as claimed in

Claim 1,

wherein said devices are image forming apparatuses.

10 8. A central management apparatus for managing devices connected to device management units by data communication with first and second device management units using different communication methods, the central management apparatus comprising:

15 a memory for storing a first transmission time set for the first device management unit and a second transmission time set for the second device management unit;

20 a first counting means for counting the elapsed time from the first transmission time when data have not been received from the first device management unit at the first transmission time;

25 a second counting means for counting the elapsed time from the second transmission time when data have not been received from the second device management unit at the second transmission time;

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a threshold setting means for setting a first threshold value for the first device management unit and setting a second threshold value different from the first threshold value for the second device management unit;

5 and

15 a determining means for determining a no reception condition when the counted elapsed time by the first counting means exceeds the first threshold value or the counted elapsed time by the second counting means exceeds the second threshold value.

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9. A central management apparatus as claimed in
Claim 8, further comprising:

25 a fixed-time transmission time setting means for setting the next fixed-time transmission time for each device; and

30 a transmission means for transmitting the set fixed-time transmission time to the device management unit connected to each device.

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10. A central management apparatus as claimed in
Claim 9,

40 wherein said fixed-time transmission time setting means sets the next fixed-time transmission time in

accordance with the communication method of the connected device management unit.

11. A central management apparatus as claimed in

5 Claim 9,

wherein said fixed-time transmission time setting means allots an earlier time to devices having a long allowable time set by the setting means than devices having a short allowable time.

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12. A central management apparatus as claimed in
Claim 8,

wherein the communication method of the first device management unit is a method for transmitting data over a public telephone line, and the communication method of the second device management unit is a method for transmitting data by electronic mail over the internet.

13. A central management apparatus as claimed in
20 Claim 12,

wherein said threshold setting means sets the threshold value of the first device management unit so as to be shorter than the threshold value of the second device management unit.

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14. A central management apparatus as claimed in
Claim 8,
wherein said devices are image forming apparatuses.

5 15. A management system including a central
management apparatus, a first device management unit for
data communication with the central management apparatus
using a first communication method, and a second device
management unit for data communication with the central
management apparatus using a second communication method,
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 said first device management unit comprising:
 a first transmission means for transmitting data
relating to a connected device to the central management
apparatus at a first fixed time,
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 said second device management unit comprising:
 a second transmission means for transmitting data
relating to a connected device to the central management
apparatus at a second fixed time,
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 said central management apparatus comprising:
 a memory for storing a first transmission time set
for the first device management unit and a second
transmission time set for the second device management
unit;
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 a first counting means for counting the elapsed time
from the first transmission time when data have not been

received from the first device management unit at the first transmission time;

5 a second counting means for counting the elapsed time from the second transmission time when data have not been received from the second device management unit at the second transmission time;

10 a threshold setting means for setting a first threshold value for the first device management unit, and setting a second threshold value different from the first threshold value for the second device management unit; and

15 a determining means for determining a no reception condition when the counted elapsed time by the first counting means exceeds the first threshold value or the counted elapsed time by the second counting means exceeds the second threshold value.

16. A management system as claimed in Claim 15,

20 wherein said first communication method is a method for transmitting data over a public telephone line, and said second communication method is a method for transmitting data by electronic mail over the internet.

17. A management system as claimed in Claim 16,

wherein said threshold setting means sets the threshold value of the first device management unit so as to be shorter than the threshold value of the second device management unit.

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18. A management system as claimed in Claim 15,
wherein said devices are image forming apparatuses.

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